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Building institutional capacity through experimentation in sustainable urban development projects in Sweden

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ABSTRACT

Experimentation is increasingly promoted as a strategy to implement sustainability ambitions, taking shape in pilot projects, testbeds, and demonstration projects. While often framed as experimental governance, questions remain about whether, and under what conditions, experimentation builds institutional capacity. This article examines how local governments use experimentation in land allocation processes to advance sustainable urban development, drawing on two Swedish urban development projects: Vallastaden and Brunnshög. Since a 2015 legal reform, local governments have had limited ability to impose local sustainability requirements. Land allocation has emerged as one of the few instruments through which local governments can influence developers. The analysis demonstrates how experimentation in land allocation activates and reshapes knowledge resources, relational resources, and mobilization capacity by enabling learning, fostering collaboration with developers, and testing new governance tools. However, weak integration with regulatory frameworks and limited mechanisms for continuity reduce the capacity-building potential of these experiments. The article argues that embedding experimentation within formal governance structures is crucial to avoid fragmented outcomes and legitimacy concerns.

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Sustainable urban development projects; institutional capacity building; land allocation processes; local governments; developers; experimental governance

1. Introduction

Experimentation is increasingly used as a key strategy in planning to achieve sustainability goals, taking shape through initiatives such as pilot projects, testbeds, living labs, and demonstration projects (Gartlinger and Gualini 2025; Hellquist, Balfors, and Sondal 2025; Scholl and De Kraker 2021). These efforts vary in scale, scope, and purpose, but they are generally characterized by a focus on sustainability, innovation, collaboration, and learning, all embedded within specific place-based contexts (Evans and Karvonen 2014; Witzell and Oldbury 2023). Bulkeley (2023) highlights four dynamics that explain the growing reliance on experimentation: the redistribution of governing

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authority, the changing relationship between knowledge and policy, the challenge of acting under indeterminacy, and the shifting meaning of progress in a climate-altered world. Rather than reducing complexity, experimentation deliberately engages with uncertain and messy conditions to generate new insights and potential pathways for action (Bulkeley 2023).

A central concern in previous studies on experimentation has been the shifting role of public actors, particularly local governments (Grundel and Trygg 2024). The rise of experimentation has transformed planning from a more hierarchical structure with defined responsibilities into a more horizontal and collaborative arrangement (Eneqvist and Karvonen 2021; Mäntysalo et al. 2015). Local governments are no longer seen only as regulators or providers of services but increasingly as promoters, enablers or partners, taking on roles such as visioning, facilitating, supporting, amplifying, and guarding (Eneqvist and Karvonen 2021; Kronsell and Mukhtar-Landgren 2018). Experimental approaches can increase flexibility and innovation, but they also risk weakening accountability and legitimacy, especially when responsibilities become fluid and disconnected from formal mandates (Berglund-Snodgrass and Mukhtar-Landgren 2020; Eneqvist et al. 2022; Haderer 2023; Torrens and von Wirth 2021). This concern raises questions about governance capacity (Castán Broto et al. 2019; Grundel and Trygg 2024; Haderer 2023).

Although experimentation is widely promoted as a means to implement sustainability goals – and by some even conceptualized as a permanent mode of governing termed experimental governance (Bulkeley 2023; Eneqvist et al. 2022; Kronsell and Mukhtar-Landgren 2018) – there is limited understanding of whether, and under what conditions, experimentation contributes to institutional capacity. Institutional capacity is 'the ability of administrative and government organizations and agencies to respond to and manage current social and environmental challenges through decision-making, planning and implementation processes' (Polk 2011, 187). Strengthening institutional capacity is important to ensure experimentation supports rather than undermines legitimacy (Eneqvist et al. 2022). Without such capacity, local governments risk an implementation gap between policy goals and actual outcomes (Hodson, Evans, and Schliwa 2018). Previous research has indicated that experimentation can enhance institutional capacity for sustainable urban development (Gartlinger and Gualini 2025; Isaksson and Hagbert 2020). Still, more work is needed to examine how experiments are planned and governed in practice. This includes understanding why local governments engage in experimentation and what implications these practices hold for the long term (Bulkeley and Broto 2013; Grundel and Trygg 2024; Witzell and Oldbury 2023).

Against this backdrop, the Swedish planning system offers a particularly relevant context for examining land allocation as a form of experimental governance. On the one hand, Sweden has a strong tradition of local planning autonomy, making local governments key actors in advancing sustainability agendas (van der Leer et al. 2023). On the other hand, since 2015, a national legal reform has limited local governments' ability to impose local sustainability requirements through traditional planning instruments (Caesar 2016; Candel and Paulsson 2023). This shift has altered the balance of authority, created new institutional structures and driven experimentation in urban planning (Parks 2019; Smedby 2020). At the same time, it has constrained traditional planning instruments and prompted local governments to experiment with alternative governance arrangements, of which land allocation has emerged as a crucial instrument through

which local governments attempt to steer urban development in more sustainable directions (Francart et al. 2019; van der Leer et al. 2023).

In this article, land allocation is understood as an experimental governance arrangement, where sustainability goals, responsibilities, and implementation mechanisms are tested, negotiated, and revised over time. Its effectiveness, therefore, depends on institutional capacity to formulate strategic goals, manage ongoing relationships between local governments and developers (Brokking, Liedholm Johnson, and Paulsson 2020; Caesar 2016; Candel and Törnå 2022), and translate experimental practices into governance routines. Previous research indicated that roles, responsibilities, and influence are not fixed, but shift throughout development processes (Brokking, Liedholm Johnson, and Paulsson 2020; Karrbom Gustavsson, Hallin, and Dobers 2024; Spit 2025). By analysing land allocation as an example of experimental governance, this article contributes to debates on how experimentation in land allocation processes influences institutional capacity for sustainable urban development. The article draws on two Swedish urban development projects with high sustainability ambitions. It contributes to debates on experimental governance and the evolving role of local governments in the relationship with developers.

Sustainable urban development is often presented as a clear goal, but it is a contested and evolving concept in practice. What is considered sustainable varies across countries and within cities, differing among departments and actors (Metzger and Lindblad 2020). As Hallin, Karrbom-Gustavsson, and Dobers (2021) note, sustainability is inherently local, temporal, and political, shaped by changing interests, ideologies, and practical constraints. This article uses the concept as it is framed and mobilized within planning processes, focusing on how local governments and developers interpret and operationalize it in practice. This approach enables the article to illustrate how sustainability influences and is influenced by land allocation processes (Hallin, Karrbom-Gustavsson, and Dobers 2021; Metzger and Lindblad 2020). Political dynamics influence the sustainability agendas of local governments. However, the empirical focus here is on how project teams within the local government, in negotiation with developers, implement these agendas through experimental governance practices. The relationship and interactions between local governments and developers are examined as the key site where institutional capacity can be developed, with recognition that other actors may also play a role beyond the scope of this article.

The article is structured as follows. Section 2 provides background on urban planning and land allocation processes in Sweden. Section 3 introduces the analytical framework of institutional capacity and experimentation. Section 4 outlines the materials and methods used in the case study research. Section 5 presents the analysis of the empirical material, followed by a concluding discussion in Section 6.

2. A brief overview of urban planning and land allocation processes in Sweden

Sweden's decentralized urban planning system gives local governments a planning monopoly, meaning they have the authority to decide when and where development takes place within their municipal boundaries (Högström, Balfors, and Hammer 2019). Planning is regulated by the Planning and Building Act (*plan- och bygglagen* in Swedish),

which defines two key planning instruments at the municipal level: the comprehensive plan (*översiktsplan* in Swedish) and the detailed development plan (*detaljplan* in Swedish). The comprehensive plan covers the entire municipal area and outlines the general use, integrating national and regional plans and programmes. The detailed development specifies land use and building regulations for a particular area. Detailed development plans are usually drawn up when new development involves one or several properties. This plan regulates key elements such as permitted land uses and building dimensions (Valtonen, Falkenbach, and Viitanen 2018). Building permits are required for new construction and must comply with the detailed development plan and national building regulations (Kalbro, Lindgren, and Paulsson 2015). Detailed development plans are legally binding documents, whereas the comprehensive plan serves as a non-binding guideline for the development of detailed development plans. Swedish local governments have complemented these formal planning instruments with quality and design programs, such as architectural or sustainability programs, that guide the design and sustainability of new developments (Kalbro, Lindgren, and Paulsson 2015). These programs are often created collaboratively with developers and other actors (Austin 2013; Parks 2019). They are not legally binding unless integrated into detailed development plans.

A significant share of land suitable for new development in Sweden is owned by local governments (Caesar 2016; Caesar and Kopsch 2018; Singhapathirana, Hui, and Jayantha 2022). Thus, local governments act as both planning authorities and landowners, giving them a powerful position in shaping urban development (Brokking, Liedholm Johnson, and Paulsson 2020; Caesar 2016; Granath Hansson 2025; Högström et al. 2024). In Sweden, public land allocation processes have long been a crucial part of urban planning practice, with local governments utilizing their land ownership since the 1970s to influence urban form and function (Caesar and Kopsch 2018; Olsson 2018). While planning instruments, such as the detailed development plan and building permits, provide formal regulatory control (Candel and Törnå 2022), local governments face legal constraints when imposing project-specific sustainability requirements. Since a legal reform in 2015, local governments' possibilities to set stricter (sustainability) demands on the technical properties of buildings (*särkrav* in Swedish) have been limited, as requirements must be predictable and uniform across the country in order to avoid additional construction costs due to inconsistent local rules. As a result, local governments increasingly rely on their role as landowners to promote sustainability goals through land allocation processes, which have emerged as a key governance arrangement for steering urban development in more sustainable directions (Caesar 2016; Francart et al. 2019).

Land allocation processes are complex, often involving negotiations between developers and local governments on a case-by-case basis (Granath Hansson 2025). Four main types of land allocation procedures are commonly used (Högström et al. 2024): direct, bid, comparative bid, and competition, as shown in Table 1. Instead of selling land, land can be leased through site leasehold (*tomträtt* in Swedish), generating annual fees without a sale. In 2024, 285 local governments in Sweden reported owning land suitable for housing development (Boverket 2024). Of these, 195 local governments used land allocation procedures in 2024 (Boverket 2024). The distribution of the selection methods used is shown in Table 1.

Table 1. Types of land allocation procedures and the number of local governments using this procedure in 2024.

Land allocation procedure	Description	Number of local governments using this procedure out of 195 using land allocation in 2024 (Boverket 2024)
Direct	A single developer is granted the land allocation without considering other proposals or competitors	129
Bid	Developers compete based on predefined criteria and requirements, with price being the determining factor	28
Comparative bid	Similar to the bid procedure but incorporates additional quality considerations where the price is not decisive	69
Competition	The competition procedure involves evaluating more advanced design proposals using established criteria and development prerequisites	48

Land allocation occurs either before or after a detailed development plan is prepared. Local governments employ these processes to varying degrees of control and involvement, influencing the integration of housing and sustainability goals into development (Krigsholm, Puustinen, and Falkenbach 2022). Recent studies have shown that sustainability criteria are increasingly being incorporated into land allocation processes (Candel and Törnå 2022; Francart et al. 2019; Healey Trulsrud and van der Leer 2024; Storbjörk, Hjerpe, and Glaas 2019). When a developer is awarded land, the terms are formalized in a land allocation agreement (Caesar 2016), which the Planning and Building Act does not regulate, as it is defined as a civil contract. These agreements typically include general conditions applicable to all projects in that municipality, such as construction start dates, cost responsibilities, time constraints, transfer restrictions, and project-specific conditions. These may include requirements for housing tenure, energy performance, construction methods, or compliance with building certification systems for sustainability (Caesar 2016). However, including these requirements in land allocation agreements has raised questions about whether these local governments are violating the law or acting in a legal grey area (Francart et al. 2019; Olsson 2018).

As discussed in Section 1, land allocation is no longer merely a procedural or contractual instrument. However, it has become an arena for experimentation through which local governments navigate legal constraints, negotiate sustainability ambitions, and test new collaborative arrangements. Such experimentation raises important questions about how these practices shape the institutional capacity for sustainable urban development. The following section, therefore, outlines the institutional capacity framework used in this article.

3. Analytical framework: institutional capacity building through experimentation

To explore whether and how experimentation in land allocation contributes to institutional capacity building, this article draws on Healey's institutional capacity framework, which consists of three core dimensions: knowledge resources, relational

resources, and mobilization capacity (Healey 1998). These dimensions highlight how planning processes can enable societal change by mobilizing and coordinating diverse actors towards collective goals (De Magalhães, Healey, and Madanipour 2002). Institutional capacity is not a fixed resource but a dynamic and evolving system, shaped by external forces and ongoing interactions between structures, ideas, narratives, and identities (Wretling and Balfors 2021). Healey (2004) already linked experimentation to institutional capacity, emphasizing that effective governance depends on creativity, learning from success and failure, and balancing flexibility with control. Building on this, more recent research underlines the role of experimentation as a driver for institutional capacity in planning (Gartlinger and Gualini 2025; Isaksson and Hagbert 2020). This article extends the institutional capacity framework by examining how experimentation in land allocation influences each of its three dimensions.

Knowledge resources refer to the availability, development, and integration of various forms of knowledge: formal, informal, and tacit knowledge, needed to steer urban development. This includes actors' understanding of sustainability issues, access to relevant information, and co-producing and exchanging knowledge across institutional boundaries (De Magalhães, Healey, and Madanipour 2002; Norell Bergendahl 2016; Polk 2011). Relational resources relate to the structure, reach and quality of networks and relationships among actors involved in planning processes. This dimension reflects the social capital within and across actor groups, influencing collaboration, trust-building, and knowledge sharing (De Magalhães, Healey, and Madanipour 2002; Norell Bergendahl 2016; Polk 2011). Mobilizationcapacity refers to the ability of actors to activate and align knowledge and relational resources in order to initiate, sustain and steer collective action and drive change. It focuses on how planning actors use strategic tools, navigate institutional landscapes and influence collective action (De Magalhães, Healey, and Madanipour 2002; Norell Bergendahl 2016; Polk 2011).

The three dimensions are interconnected and interdependent: while knowledge and relational resources provide the conditions for action, mobilization capacity captures how these resources are brought together. The three dimensions help explain differences in the ability of planning projects and contexts to deliver shared goals (De Magalhães, Healey, and Madanipour 2002; Healey 1998). The dimensions are particularly relevant for analysing land allocation as an experimental governance arrangement, as land allocation processes rely on the co-production and negotiation of knowledge about sustainability, evolving relational arrangements between local government and developers, and the mobilization of these resources through contractual and procedural instruments. Table 2 presents the analytical framework developed for this article. It summarizes the elements of the three institutional capacity dimensions, drawing on Healey (1998) and De Magalhães, Healey, and Madanipour (2002), and extends them by incorporating insights from more recent literature on experimentation in planning.

4. Materials and methods

This article employs a multi-sited case study design to explore how experimentation in land allocation processes influences institutional capacity building for sustainable urban development. A multi-sited case study was chosen to move beyond the limitations of single case studies and identify similarities and differences across local contexts,

Table 2. Analytical framework: Institutional capacity dimensions and experimentation.

Dimension	Elements	Contributing activities of experimentation	Key references
Knowledge resources	Diverse and rich knowledge base	– Integrating formal expertise with tacit and local knowledge – Deepening actors' understanding of sustainability issues – Co-producing knowledge across institutional boundaires – Strategic plans or visions providing adequate support for new approaches in planning	(Grundel and Trygg 2024; Norell Bergendahl 2016; Sondal, Hellquist, and Balfors 2024; Trygg and Wenander 2022; Witzell and Oldbury 2023)
	Shared frames of reference	– Co-producing joint visions, strategies, and values – Establishing shared key values for development – Providing local strategies as interpretive frameworks to operationalize visions and goals – Linking diverse actors around sustainability ambitions – Challenging the established frames of reference	(Isaksson and Heikkinen 2018; Norell Bergendahl 2016; Trygg and Wenander 2022)
	Integration of knowledge and frames of reference	– Aligning local strategies and pilots with broader policy frameworks – Promoting cross-sectoral knowledge exchange	(Isaksson and Hagbert 2020)
	Openness and learning capacity	– Creating opportunities for new perspectives – Embracing uncertainty and disruption – Embedding feedback and ongoing learning into planning – Enabling learning through pilots and social interaction – Discussions about new perspectives and agendas	(Gartlinger and Gualini 2025; Norell Bergendahl 2016; Polk 2011)
Relational resources	Reach and interconnectedness of networks	– Establishing public-private collaboration and partnerships – Building trust and reciprocity through joint experiments	(Isaksson and Heikkinen 2018; Smedby and Neij 2013; Sondal, Hellquist, and Balfors 2024; Trygg and Wenander 2022)
	Network morphology and integration	– Redistributing and renegotiating roles between different actors – New arenas for inter-organizational collaboration – Creating new actor relations	(Gartlinger and Gualini 2025)
	The balance between formal authority and informal influence within planning networks	– Involving informal networks in planning processes – Regulatory sandboxes enabling innovative sustainability tools to be tested within formal decision-making arenas	(Sondal, Hellquist, and Balfors 2024)
Mobilization capacity	Utilizing opportunity structures	– Using pilots and testbeds to enable action – Testing governance instruments such as climate contracts and sustainability agreements	(Isaksson and Hagbert 2020; Isaksson and Heikkinen 2018; Norell Bergendahl 2016; Smedby and Neij 2013; Trygg and Wenander 2022)

(*Continued*)

Table 2. Continued.

Dimension	Elements	Contributing activities of experimentation	Key references
		– Pilot and demonstration projects to operationalize strategies and test effects in local contexts – Requires scope in planning in terms of time, competence, openness, and economic resources	
	Access to institutional arenas	– Integration of planning instruments across municipal units – Strategies and approaches should adhere to the actual existing conditions (like finances and systems), not be too open	(Norell Bergendahl 2016; Trygg and Wenander 2022)
	Mobilization strategies	– Trial-and-error experimentation with planning tools – Experimental monitoring frameworks to steer implementation – Overcoming institutional inertia, being okay with not having guarenteed outcomes/certain and measurable outcomes	(Gartlinger and Gualini 2025; Norell Bergendahl 2016; Smedby and Neij 2013)
	Change agents	– Individuals driving experimental governance	(Isaksson and Heikkinen 2018; Witzell and Oldbury 2023)

Table 3. Case overview.

	Vallastaden (Linköping)	Brunnshög (Lund)
Type	Greenfield, new-built development	Greenfield, new-built development
Size/area	20 hectares	225 hectares (of which 100 hectares developed by the local government)
Duration	2011 - 2030	2006 - 2055
Programme	Housing, commercial properties, schools, and a care home	Housing, offices, research facilities, commercial properties, schools, and services

thereby generating insights of broader relevance (Krehl and Weck 2020). The analysis focuses on two urban development projects in Sweden: Vallastaden (Linköping) and Brunnshög (Lund), as shown in Table 3. Both are greenfield developments with high sustainability ambitions and an explicit focus on experimentation in land allocation processes. The cases were selected using a similar case strategy (Flyvbjerg 2006), since they share key characteristics: scale, ambition and institutional setting. This makes the cases particularly suitable for examining how experimental practices in land allocation processes shape institutional capacity.

4.1. Case description: Vallastaden (Linköping)

Vallastaden is a 20-ha urban development project started in 2011. The first phase of Vallastaden, comprising approximately 1,000 dwellings, was showcased at the national housing and urban planning exhibition, Vallastaden2017. A separate company was established to coordinate the area's development for the housing exhibition. The company was decommissioned in 2018, after which the local government's planning department took over responsibility for planning and development. The urban planning and housing exhibition served to test innovative ideas, including new infrastructure solutions like an underground utility tunnel. This 1.8 km tunnel includes cables and pipes for district heating, electricity, telecommunications, water, waste, and sewage systems. Vallastaden was designed to be a model of sustainable urban development, aiming to achieve resource efficiency through integrated systems for waste management, energy production, transport, and social sustainability through shared facilities and communal spaces. A key aspect of the development process was its land allocation processes. Instead of selling land to the highest bidder, the local government introduced a fixed price, and developers had to compete based on various criteria, including sustainability. As a result, around 40 different developers were involved in the first phase, creating a diverse mix of buildings.

4.2. Case description: Brunnshög (Lund)

Brunnshög is a 225-hectare urban development project initiated in 2006, closely linked to the new MAX IV and European Spallation Source (ESS) research facilities. The vision for Brunnshög is to become a Positive Energy District (PED), which means it will generate more energy than it uses. An important part of achieving this goal is a low-temperature district heating system that utilizes excess heat from the research facilities. In addition to these research facilities, Brunnshög will include 6,000 dwellings, offices, commercial spaces, schools and public services. The first buildings were completed in 2015, and in 2020, a new tramline was ready to connect the city centre of Lund with the two research

facilities, with several stops within Brunnshög. The first phase (Southern Brunnshög) is currently complete, and the second phase (Central Brunnshög) is under development. A separate project organization within the local government is responsible for developing Brunnshög and operates from a shared office in a different building from the rest of the local government. Branded as a leading example of European sustainable urban development, Brunnshög's sustainability strategy follows three core principles: minimize, balance and maximize. The project aims to minimize climate impact, maximize urban life and participation, and balance construction with farmland preservation and biodiversity. The district is being developed gradually over approximately 50 years, with continuous evaluation and iterative learning to adapt to changing needs and learn from experiments. In contrast to Vallastaden's fixed-price land allocation, Brunnshög applies various land allocation methods, ranging from sustainability-oriented competitions to traditional bidding.

4.3. Data collection and analysis

The study combines semi-structured interviews and document analysis to capture both the formal design of experimental land allocation processes and the experiences of planners and developers. An overview of the interviews and analysed documents is provided in Table 4. A total of 15 interviews were conducted with local government representatives (10) and developers (5). The interviews with the local government representatives included the project leaders for the urban development projects, urban planning engineers (*planeringsingenjör* in Swedish) responsible for detailed development plans, land and development engineers (*mark- och exploateringsingenjör* in Swedish) managing

Table 4. Overview of interviews and documents analysed.

Urban development project	Interviews (year interviewed)	Documents (publication year)
Vallastaden (Linköping)	5 interviews with representatives of the local government (2022–2023); 1 interview with a consultant working for the local government (2024); 1 interview with a developer (2025)	Architectural competition Vallastaden (2012); Idea program Vallastaden (2012); OKIDOKI's plan for Vallastaden (2013); Detailed development plan Vallastaden (2013); Quality program Vallastaden (2013); Follow-up report Linköping municipality (2017/2018); Idea program Eastern Vallastaden (2023); Documentation of 8 land allocation processes, including prospectus and jury assessments (2013–2022)
Brunnshög (Lund)	4 interviews with representatives of the local government (2023 –2024); 4 interviews with developers (2024–2025)	Lund NE/Brunnshög vision and goals (2012); Elaboration of the comprehensive plan for Lund NE/Brunnshög (2013); Outline plan for central Brunnshög (2015); Brunnshög: summary of visions, strategies and goals (2016); Detailed development plans Brunnshög; Sustainability in Brunnshög: how the district will achieve the goals of Lund municipality (2022); Documentation of 12 land allocation processes including prospectus, proposals, and jury assessments (2010–2023); 42 sustainability agreements between the local government and the developers (2017–2023)

land allocation processes, and city architects, whose responsibilities span strategic planning, urban design and building permits. These actors are not politically elected but professional officials within the municipal administrations. The choice to focus on these roles reflects that they were directly responsible for designing and implementing the land allocation processes. On the developer side, participants included project leaders responsible for their construction projects.

Interviews explored planning ambitions, land allocation procedures, responsibility distribution, and perceived outcomes of experimental practices in land allocation, including reflections on sustainability goals and trade-offs. Interviews lasted between 32 and 65 min and were transcribed for analysis. Key planning and land allocation documents included visions, strategies, detailed development plans, land allocation competition prospectuses, jury assessments, sustainability agreements, and follow-up reports. These documents provided a longitudinal perspective on the land allocation processes in both urban development projects. A detailed analysis of the different land allocation procedures is provided in the Appendix.

Following Braun and Clarke's (2006) six-phase model, a theory-driven thematic analysis was used, guided by the analytical framework presented in Table 2. The framework served as a lens for analysing how local governments and developers reflected on land allocation practices, and how land allocation was formalized and operationalized in planning documents. Institutional capacity was analysed by the three dimensions – knowledge resources, relational resources and mobilization capacity – and how they function together to address collective planning concerns. The analysis focused on how experimentation in land allocation contributes to the development, reconfiguration, or contestation of these dimensions through new competences, practices, and relational arrangements.

A deductive coding approach was applied, with codes and themes informed by the analytical framework, while remaining open to additional patterns that emerged from the data. Coding was conducted in NVivo and focused on the experimental aspects of the three dimensions of institutional capacity. The analysis followed Braun and Clarke's six phases: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report (Braun and Clarke 2006). Through iterative coding of planning documents and interviews, key themes were identified, presented in Section 5, and summarized in Figure 1. Conclusions about institutional capacity were derived by examining how the identified themes reflect changes in the ways knowledge is produced and shared, relationships are organized, and collective action is mobilized within land allocation processes.

5. Results

This section presents and discusses the analysis of the case study of the two Swedish urban development projects to understand whether and how experimentation in land allocation processes builds institutional capacity for sustainable urban development. The section is structured by the three dimensions of the institutional capacity framework: knowledge resources, relational resources and mobilization capacity.

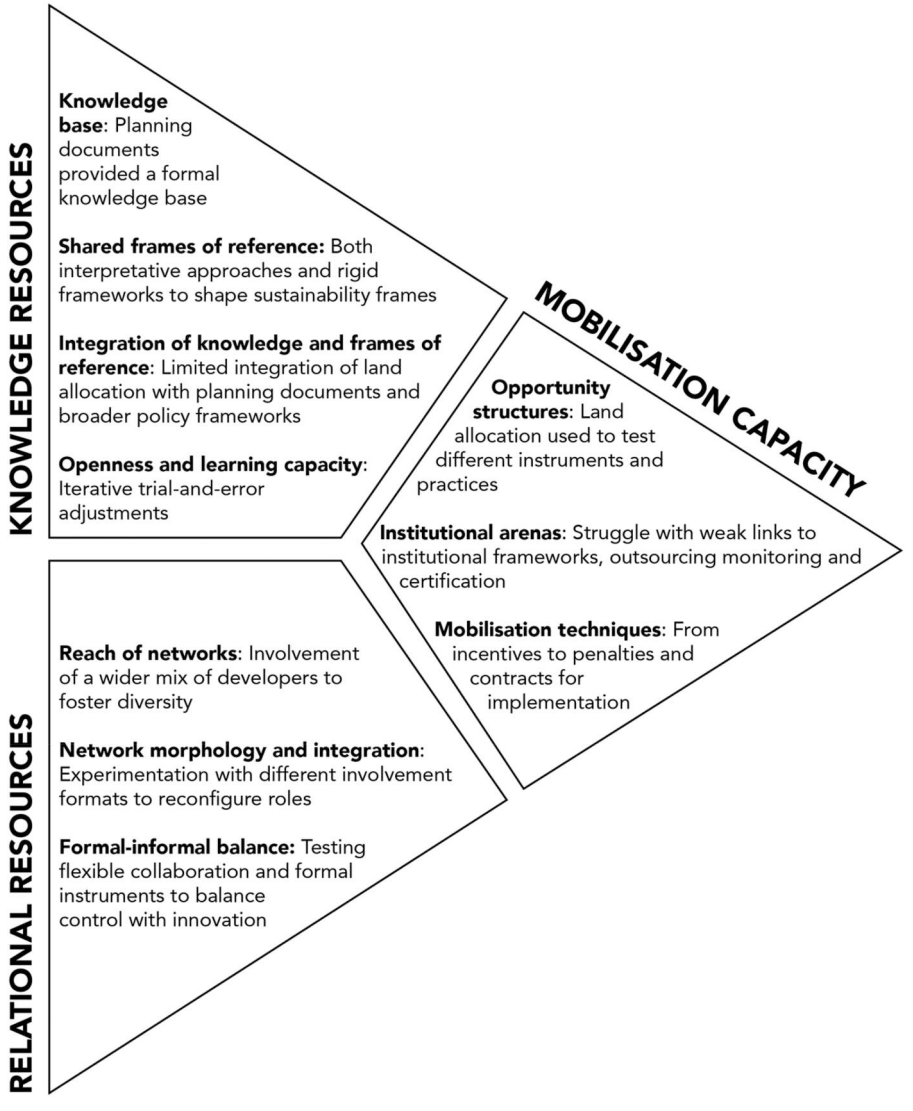

Figure 1. Overview of key experimental practices in land allocation for building institutional capacity in the cases of Vallastaden and Brunnshög.

5.1. Knowledge resources

In both Vallastaden and Brunnshög, planning documents – such as vision and goal documents, quality programmes and sustainability frameworks – provide the formal knowledge base for sustainable urban development. These documents outline the sustainability ambitions and serve as reference points across different planning levels and timeframes. In Vallastaden and Brunnshög, the sustainability ambitions focus on reducing CO2 emissions, improving energy efficiency, promoting mixed housing types, creating meeting places, and enhancing public transport. However, these vision and goal documents rarely include how these ambitions should be operationalized in land allocation. Vallastaden's 2023 Idea Program explicitly identifies land allocation as a strategic tool to

encourage future ideas that benefit energy-, resource-, and climate-efficient construction, and promote social sustainability at various levels. Similarly, Brunnshög's 2022 sustainability strategy acknowledges developers' contributions but does not mention how land allocation integrates the ambitions into the procedures.

> And in such a large area, you'll have many land allocation competitions over time. And in each competition, you can adjust what is being competed on and what type of projects are being requested, as long as it fits within the regulations of the detailed development plan. In this way, land allocation competitions are a very good tool for a municipality to get different types of projects.
>
> Local government representative Vallastaden, 2022

The analysis shows that experimentation emerges as the primary mechanism for translating broad sustainability goals into actionable land allocation practices within the limits of the detailed development plan. Both local governments use experimentation to test various methods and refine (sustainability) criteria based on observed outcomes. In Brunnshög, since 2015, the local government has experimented with price-based, quality-based, and hybrid competition models for land allocation. Early experiments allowed developers freedom in interpreting sustainability goals, but this led to a focus on low-impact solutions. Subsequent experiments introduced structured scoring systems that emphasized three core criteria: climate neutrality, innovation, and architectural quality. The process has since evolved, incorporating building certification systems such as *Miljöbyggnad*, the most common certification system for sustainable buildings in Sweden (Wallhagen et al. 2023), and offering points for energy and smart city solutions. Each iteration reflects a trial-and-error approach, where outcomes inform refinements in the evaluation framework and scoring systems.

> We do not really have a fixed way of working; instead, we always want to adapt based on the lessons learned from the last time, and then we move forward and try to find a bit of variation.
>
> Local government representative Brunnshög, 2024

Vallastaden also illustrates the experimental approach. The initial point-based system allowed developers to select sustainability criteria (e.g. passive houses, solar panels or winter gardens). Early land allocation processes showed that developers prioritized cheaper and less ambitious options. In response, the local government shifted the approach to a vision-based assessment framework, emphasizing developers' strategies for achieving CO2 neutrality. In the 2022 land allocation process, sustainability was no longer explicitly mentioned. However, it was included under the concept of resilience, enabling developers to propose solutions and explore multiple pathways to reach these overarching goals. The experiments reveal trade-offs between open-ended and interpretive approaches, which aim for innovation and contextual adaptation, and more rigid frameworks that offer comparability but may constrain creativity and limit innovative sustainability solutions.

5.2. Relational resources

Implementing sustainable urban development in Brunnshög and Vallastaden also depends on relational resources, such as trust, collaboration, and mutual understanding

between local governments and developers. The land allocation processes serve as experimental arenas, where collaboration is tested, adjusted and reconfigured. Both local governments have deliberately utilized land allocation to attract a diverse range of developers, including smaller and newer actors, while experimenting with relational strategies to strike a balance between control and flexibility.

In Vallastaden, smaller plot sizes were intentionally introduced as an experiment to lower entry barriers, broaden participation, and generate architectural and social diversity. Brunnshög and Vallastaden adapted their strategies to meet developers' needs, such as revising plot sizes. The land allocation processes in Brunnshög were also designed to generate momentum and visibility, turning the project into a shared experimentation platform.

> The municipality also wants to get positive marketing for its area and its project to attract other developers or to generate interest in the area and make sure it gains some momentum. We are, so to speak, entirely dependent on each other, and that is how it should be. And the municipality can not be so visionary that no one wants to build there.
>
> Local government representative Brunnshög, 2024

This interdependence is central: both local governments recognize that sustainable urban development cannot be achieved without collaboration. However, the form of collaboration itself has been experimented with. In the later land allocation processes in Vallastaden, regulatory control is relaxed, allowing developers to experiment within a broader framework of sustainability ambitions.

> Instead, we should be open and flexible, focusing on monitoring what is necessary without overregulating things that are not. We do not need to control everything; let their entrepreneurship flourish, and allow them to experiment. Sometimes mistakes will happen, but that is not a disaster.
>
> Local government representative Vallastaden, 2024

In both cases, local governments experimented with different formats of developer involvement. In Vallastaden, open developer dialogues were used at early stages to co-design the vision and quality program. This process led to a joint agreement to require 25% stricter energy performance than the national building regulations. In Brunnshög, early dialogues were discontinued after the local government felt this undermined local authority. Instead, the local government experimented with involving an *anchor developer* – a developer engaged early in the urban development process to represent the interests of future developers for an entire block or area. The anchor developer assumes a proactive, coordinating role, supporting and advocating for forthcoming developers while helping to drive the planning process forward. In this case, the anchor developer was brought in to establish a closer, yet more selective, partnership to co-shape the vision for the next phase of development.

> Our approach is to be proactive; we do not want to just sit and wait for large companies to say they want to join, creating a last-minute rush. Instead, we are staying ahead by securing an anchor developer who brings a customer perspective. Together, we will spend the next year exploring what the future city for work should look like.
>
> Local government representative Brunnshög, 2023

After land allocation, regular coordination meetings were held in both projects, where developers exchanged ideas, aligned timelines, and sometimes showcased sustainability solutions. A tension influencing the relational dynamics is the dual role of the local governments in land allocation processes, acting both as planning authorities, where they need to realize long-term sustainability goals, and as landowners, dependent on private investment and market dynamics. To manage this tension, Brunnshög introduced sustainability contracts, which were negotiated before the land allocation agreement was finalized. These contracts formalize developers' commitments based on their proposals and outline responsibilities. While appreciated for their clarity, such agreements can also conflict with developers' need for design flexibility in early project stages.

> So, then I wrote that I want to investigate it, and we got a reply saying, 'Yes, but are you going to do it or are you not going to do it?'. Maybe it is because they want us to push us a little more.
>
> Developer Brunnshög, 2024

This quote highlights how experimental planning instruments, such as sustainability contracts, push developers to make early commitments but also create friction by reducing the room for iteration. Vallastaden experimented with transitioning from a rigid point system to an open-ended model, providing developers with more interpretive space to innovate. Both local governments thus navigated the trade-off between flexibility and control.

5.3. Mobilization capacity

Mobilization capacity refers to the ability of actors to combine knowledge and relational resources to implement shared goals, in this case, sustainable urban development. The 2015 legal reform highlighted the importance of land allocation processes in establishing stricter sustainability requirements for developers, although this remains a legal grey area. Within this uncertainty, the analysis reveals how land allocation processes become arenas of experimentation, where local governments test various strategies to secure, enforce, and adapt the implementation of sustainable urban development. Particularly in the early stages, land allocation processes offer local governments opportunities to experiment with innovative requirements and accountability mechanisms. However, the potential is constrained in later stages by institutional fragmentation and weak continuity with other regulatory processes, such as building permits. The following reflection illustrates the operational gap:

> We usually try to do it beforehand. However, sometimes I do not know that they are applying for building permits, and then, yes, it can come later in the process. […] It should be in connection with the final inspection. And it is also difficult, because we do not always know when that happens. The internal procedures do not always work.
>
> Local government representative Brunnshög, 2024

The dual role of local governments as both landowners and planning authorities influences mobilization capacity. Local governments are expected to safeguard their long-term sustainability ambitions, but they depend on developers' investments under difficult market conditions. To navigate this tension, both local governments tested different mobilization techniques. For their part, developers often resisted early commitments and sought flexibility, while local governments experimented with

securing such commitments up front. Some developers, however, welcomed stricter follow-up, seeing it as a method that could enhance their accountability and credibility:

> It is important to be able to demonstrate that we actually evaluate what we've promised. I think many municipalities are concerned that developers and construction companies do not deliver on their promises […]. So, we have assessed that if we can clearly show, in black and white, that we follow up and what the outcome was, it greatly increases our credibility. That, in turn, improves our chances of participating in future land allocations or receiving direct allocations. To be seen as a serious actor who does what is required, that is important.
>
> Developer Brunnshög, 2024

In Vallastaden, the early mobilization strategy was largely incentive-based. Non-compliance was framed not as a punishment but as a loss of advantage in future land allocations. Over time, however, the local government experimented with more formal enforcement, including financial penalties. These efforts illustrate how mobilization strategies evolved from cooperative to more coercive instruments, though the legal and practical challenges of enforceability remain unresolved. Brunnshög experimented with sustainability agreements to translate planning goals into contractual obligations. While this provided clarity, the agreements also revealed the limits of enforcement: once land was allocated and construction underway, local government leverage was weak. Developers noted that inconsistent enforcement undermines credibility:

> If you do not comply, the municipality does not really have any opportunity to be sharp. (…) Then you hear during the project that many others ignore it, and it is a bit of a shame, I think.
>
> Developer Brunnshög, 2024

Both local governments also experimented with external tools such as certification schemes. In Brunnshög, the Swedish *Miljöbyggnad* certification for sustainable buildings was required; however, developers were not obliged to obtain the actual certificate, thereby diluting enforcement. In Vallastaden, monitoring was outsourced to consultants, which fragmented institutional learning and knowledge. These experiments illustrate attempts to supplement weak local government enforcement capacity and highlight how fragmented responsibility can reduce mobilization potential. However, over time, both local governments shifted their experimental focus toward tangible sustainability dimensions, particularly architecture and physical design, because these were easier to monitor and evaluate than social initiatives.

> We should evaluate the architecture, point. Within the concept of architecture, we can incorporate the classic aspects of environmental, social, and economic sustainability, but there must be a physical connection. We can not evaluate something just because someone says they will organise barbecue evenings for the residents.
>
> Local government representative Vallastaden, 2023

5.4. Building institutional capacity through experimentation in Vallastaden and Brunnshög

The cases of Vallastaden and Brunnshög demonstrate that land allocation processes can serve as institutional arenas, where resources, authority, and potential for change exist.

As illustrated in Figure 1, the two local governments test how knowledge resources can be mobilized, shifting from rigid point systems to open-ended, developer-driven visions, and experimenting with collaboration modes that balance trust, dialogue, and responsiveness to developers' needs. Mobilization strategies reveal experimentation with accountability tools, ranging from incentive-based approaches to contractual obligations and penalties, alongside pragmatic shifts toward tangible and monitorable sustainability dimensions. Although experimentation in land allocation processes often emerges out of necessity, given legal ambiguities, market constraints, and institutional fragmentation, the land allocation processes illustrate an ongoing search for learning. At the same time, the lack of structured feedback loops and weak institutional integration risks undermining continuity and legitimacy, as well as weakening the enforcement of sustainability objectives.

6. Concluding discussion

This article examines how experimentation in land allocation processes influences institutional capacity building for sustainable urban development, drawing on a case study of two urban development projects in Sweden. The cases of Vallastaden and Brunnshög illustrate that land allocation has evolved from a primarily technical and administrative function into a strategic instrument that enables local governments to experiment with local sustainability ambitions, collaboration mechanisms, and mobilization techniques. Since the 2015 legal reform, land allocation has remained one of the few strategic governance arrangements for local governments to influence developers and contribute to achieving sustainability goals at the local level.

The results demonstrate that experimentation contributes to knowledge resources by providing new frames of reference through the testing of alternative evaluation frameworks in land allocation processes. Iterative land allocation trials enabled local governments to observe developer behaviour and adjust sustainability criteria accordingly, illustrating a learning process. At the same time, formal knowledge resources such as strategic documents provided limited guidance for land allocation, and the goals often lost relevance over time. This reflects what Witzell and Oldbury (2023) describe as a temporal and organizational divide between early-stage visioning and implementation-focused planning. Vigar, Cowie, and Healey (2020) found that planning benefits from clear and consistent strategic goals, combined with flexibility in implementation, allowing adaptation as conditions change (Vigar, Cowie, and Healey 2020). Clarifying objectives does not necessarily restrict flexibility; instead, they can be formulated to set an overall direction for collaboration while leaving space for different solutions to emerge (Hellquist, Balfors, and Sondal 2025).

Regarding relational resources, experimentation is evident in the continual negotiation of trust, collaboration, and authority between local governments and developers. Local governments adjust plot sizes, rely on anchor developers, and move between rigid contracts and more flexible and interpretative frameworks to stimulate innovation and safeguard sustainability goals. This reflects Smedby and Neij's (2013) findings that collaborative approaches can build trust and shared knowledge, yet often struggle to deliver sustainability outcomes. The cases show that although early consensus in planning processes, such as sustainability contracts, appears

constructive, commitments tend to weaken over time as local governments encounter difficulties in enforcing agreements. They also underscore the dual role of local governments as both planning authorities and landowners, which raises questions of clarity and legitimacy (Olsson 2018). This issue can also be observed in other countries where public land development is common (Valtonen and Falkenbach 2025; Woestenburg, van der Krabben, and Spit 2019). As Candel and Paulsson (2023) emphasize, local governments constantly balance openness and control, a tension clearly evident in the shifting relational strategies observed in the land allocation processes.

For mobilization capacity, the cases illustrate how land allocation processes can serve as institutional arenas for experimenting with planning instruments. Local governments tested incentive mechanisms, sustainability agreements, penalties, and certification requirements, navigating the tension between ambition, feasibility, and enforceability. Over time, both Vallastaden and Brunnshög shifted their emphasis toward architectural quality and physical design, which may reinforce the local government's planning authority. This resonates with Haderer's (2023) call to view public authorities as proactive actors advancing collective goals and public interests, while acknowledging the inherent complexity and uncertainty of urban governance. Similarly, Puustinen et al. (2025) argue that effective carbon mitigation in construction depends on integrating instruments such as detailed development plans and building control regulations into a coherent strategy. From this perspective, land policy should not be treated in isolation but understood as part of a broader governance system in which diverse tools and policy sectors interact (Puustinen et al. 2025).

The cases illustrate a broader insight: institutional capacity remains limited when experimentation in land allocation is weakly embedded within formal governance structures. Experimentation has become a central means through which local governments seek to increase institutional capacity in response to uncertainty and shifting conditions, including evolving regulations, economic fluctuations, and emerging sustainability agendas. As the cases demonstrate, experimental strategies can facilitate adaptation, learning, and co-production, enabling local governments to respond flexibly to changing circumstances. However, when experimentation functions primarily as a compensatory strategy – addressing legal, institutional, or resource constraints without transforming underlying governance structures – its contribution to long-term sustainability outcomes might be constrained, and legitimacy may be undermined. Examples include the involvement of external actors in follow-up processes in Vallastaden and the reliance on anchor developers in visioning processes in Brunnshög. As Healey et al. (2003) emphasize, the most effective experiments build on and reinforce existing institutional structures and policy networks rather than substituting for them (Healey et al. 2003). Similarly, Roggero (2025) notes that experimentation often compensates for gaps in formal authority or capacity, enabling local governments to navigate restrictive frameworks without fundamentally questioning them (Roggero 2025). This compensatory role entails trade-offs: experiments risk being co-opted to prioritize short-term economic or political objectives at the expense of longer-term goals such as equity and environmental justice (Ehnert 2023; Haderer 2023). While experimentation can provide flexibility, it should not be treated as a substitute for robust legislation, regulation, or political vision (Isaksson, Oldbury, and

Marsden 2022). To strengthen the capacity-building potential of experimental approaches in land allocation, local governments need to align experimentation with regulatory frameworks, embed sustainability goals in legally binding instruments, and establish mechanisms for continuous learning and feedback that support both creativity and accountability (Healey 2004).

Beyond the empirical findings, this article contributes to planning theory and the experimental governance literature by reframing land allocation processes as a governance arrangement that can be used experimentally. It demonstrates how experimental land allocation processes influence knowledge resources, relational resources, mobilization capacity, and interactions between developers and local governments. By showing that experimentation is not limited to dedicated pilot projects or innovation arenas, but can be embedded within core governance arrangements and existing planning instruments, the article expands the repertoire of experimental governance tools available to local governments.

Further research needs to broaden the scope of actors examined in sustainable urban development processes and experimental governance. While this article focuses on the local government–developer relationship, other actors, including citizens, consultants, architects, contractors, and utility companies, play crucial roles in shaping sustainability outcomes. Additionally, further research should critically examine the tension between pursuing sustainability through new construction. As these greenfield development cases illustrate, sustainability efforts often focus on *how* we build, while the equally important question of *whether* we should build at all receives less attention. Future studies could therefore explore strategies for transforming and reusing the existing built environment, advancing sufficiency-oriented planning, and investigating what planning without growth could mean in practice.

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References

Austin, G. 2013. "Case Study and Sustainability Assessment of Bo01, Malmö, Sweden." *Journal of Green Building* 8 (3): 34–50. doi:10.3992/jgb.8.3.34

Berglund-Snodgrass, L., and D. Mukhtar-Landgren. 2020. "Conceptualizing Testbed Planning: Urban Planning in the Intersection Between Experimental and Public Sector Logics." *Urban Planning* 5 (1): 96–106. doi:10.17645/UP.V5I1.2528.

Boverket. 2024. *Bostadsmarknadsenkäten 2024*. https://www.boverket.se/sv/samhallsplanering/bostadsmarknad/bostadsmarknaden/bostadsmarknadsenkaten/

Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3 (2): 77–101. doi:10.1191/1478088706qp063oa.

Brokking, P., E. Liedholm Johnson, and J. Paulsson. 2020. "Implementation Strategies for Sustainable Urban Development." In *Methods and Concepts of Land Management: Diversity, Changes and New Approaches* edited by Erwin Hepperle, Jenny Paulsson, Vida Maliene, Reinfried Mansberger, Armands Auzins, and Jolanta Valciukiene, 223–234. Zurich: vdf Hochschulverlag AG. doi:10.3218/4027-2

Bulkeley, H. 2023. "The Condition of Urban Climate Experimentation." *Sustainability: Science, Practice and Policy* 19 (1): 1–14. doi:10.1080/15487733.2023.2188726.

Bulkeley, H., and V. Broto. 2013. "Government by Experiment? Global Cities and the Governing of Climate Change." *Geographers* 38 (3): 361–375. doi:10.1111/i.l475-5661.2012.00535.x.

Caesar, C. 2016. "Municipal Land Allocations: Integrating Planning and Selection of Developers While Transferring Public Land for Housing in Sweden." *Journal of Housing and the Built Environment* 31 (2): 257–275. doi:10.1007/s10901-015-9457-2.

Caesar, C., and F. Kopsch. 2018. "Municipal Land Allocations: A key for Understanding Tenure and Social mix Patterns in Stockholm." *European Planning Studies* 26 (8): 1663–1681. doi:10.1080/09654313.2018.1484427.

Candel, M., and J. Paulsson. 2023. "Enhancing Public Value with co-Creation in Public Land Development: The Role of Municipalities." *Land Use Policy* 132: 1–16. doi:10.1016/j.landusepol.2023.106764.

Candel, M., and N. Törnå. 2022. "Housing Developers' Perceived Barriers to Implementing Municipal Sustainability Requirements in Swedish Sustainability-Profiled Districts." *Journal of Housing and the Built Environment* 37: 1693–1721. doi:10.1007/s10901-021-09923-z.

Castán Broto, V., G. Trencher, E. Iwaszuk, and L. Westman. 2019. "Transformative Capacity and Local Action for Urban Sustainability." *Ambio* 48 (5): 449–462. doi:10.1007/s13280-018-1086-z.

De Magalhães, C., P. Healey, and A. Madanipour. 2002. "Assessing Institutional Capacity for City Centre Regeneration: Newcastle's Grainger Town." In *Urban Governance, Institutional Capacity and Social Milieux*, edited by Goran Cars, Patsy Healey, Ali Madanipour, and Claudio De Magalhães, 45–62. London: Routledge.

Ehnert, F. 2023. "Review of Research Into Urban Experimentation in the Fields of Sustainability Transitions and Environmental Governance." *European Planning Studies* 31 (1): 76–102. doi:10.1080/09654313.2022.2070424.

Eneqvist, E., J. Algehed, C. Jensen, and A. Karvonen. 2022. "Legitimacy in Municipal Experimental Governance: Questioning the Public Good in Urban Innovation Practices." *European Planning Studies* 30 (8): 1596–1614. doi:10.1080/09654313.2021.2015749.

Eneqvist, E., and A. Karvonen. 2021. "Experimental Governance and Urban Planning Futures: Five Strategic Functions for Municipalities in Local Innovation." *Urban Planning* 6 (1): 183–194. doi:10.17645/up.v6i1.3396.

Evans, J., and A. Karvonen. 2014. "'Give Me a Laboratory and I Will Lower Your Carbon Footprint!' — Urban Laboratories and the Governance of Low-Carbon Futures." *International Journal of Urban and Regional Research* 38 (2): 413–430. doi:10.1111/1468-2427.12077.

Flyvbjerg, B. 2006. "Five Misunderstandings About Case-Study Research." *Qualitative Inquiry* 12 (2): 219–245. doi:10.1177/1077800405284363.

Francart, N., M. Larsson, T. Malmqvist, M. Erlandsson, and J. Florell. 2019. "Requirements set by Swedish Municipalities to Promote Construction with Low Climate Change Impact." *Journal of Cleaner Production* 208: 117–131. doi:10.1016/j.jclepro.2018.10.053.

Gartlinger, I., and E. Gualini. 2025. "Climate Governance Experiments: Current Practices and Their Meta-Governance Embedding in Berlin's Solar Energy Transition." *European Planning Studies* 33 (5): 680–698. doi:10.1080/09654313.2025.2475155.

Granath Hansson, A. 2025. "Land Policy in Sweden: The Paradoxical Difficulty of Creating Affordable Housing at the Intersection of Municipal Land Allocation, Local Planning and Housing Policy." In *Land Policies in Europe: Land-Use Planning, Property Rights, and Spatial Development*, edited by T. Hartmann, A. Hengstermann, M. Jehling, A. Schindelegger, and F. Wenner, 173–185. Cham: Springer.

Grundel, I., and K. Trygg. 2024. "A Tale of Urban Experimentation in Three Swedish Municipalities." *European Planning Studies* 32 (8): 1713–1730. doi:10.1080/09654313.2024.2353697.

Haderer, M. 2023. "Experimental Climate Governance as Organized Irresponsibility? A Case for Revamping Governing (Also) Through Government." *Sustainability: Science, Practice and Policy* 19 (1). doi:10.1080/15487733.2023.2186078.

Hallin, A., T. Karrbom-Gustavsson, and P. Dobers. 2021. "Transition Towards and of Sustainability – Understanding Sustainability as Performative." *Business Strategy and the Environment* 30 (4): 1948–1957. doi:10.1002/bse.2726.

Healey, P. 1998. "Building Institutional Capacity Through Collaborative Approaches to Urban Planning." *Environment and Planning A: Economy and Space* 30 (9): 1531–1546. doi:10.1068/a301531.

Healey, P. 2004. *Creativity and Urban Governance*. http://www.tandf.co.uk/journals

Healey, P., C. De Magalhaes, A. Madanipour, and J. Pendlebury. 2003. "Place, Identity and Local Politics: Analysing Initiatives in Deliberative Governance." In *Deliberative Policy Analysis : Understanding Governance in the Network Society*, edited by M. Hajer and H. Wagenaar, 60–87. Cambridge: Cambridge University Press.

Healey Trulsrud, T., and J. van der Leer. 2024. "Towards a Positive Energy Balance: A Comparative Analysis of the Planning and Design of Four Positive Energy Districts and Neighbourhoods in Norway and Sweden." *Energy and Buildings* 318: 1–15. doi:10.1016/j.enbuild.2024.114429.

Hellquist, A., B. Balfors, and J. Sondal. 2025. "Projectification Mediates Between Experimental and Bureaucratic Institutional Logics in Urban Sustainability Planning." *Planning Practice & Research* 40: 576–597. doi:10.1080/02697459.2025.2472113.

Hodson, M., J. Evans, and G. Schliwa. 2018. "Conditioning Experimentation: The Struggle for Place-Based Discretion in Shaping Urban Infrastructures." *Environment and Planning C: Politics and Space* 36 (8): 1480–1498. doi:10.1177/2399654418765480.

Högström, J., B. Balfors, and M. Hammer. 2019. "The Role of Small-Scale Planning Projects in Urban Development: A Case Study in the Metropolitan Stockholm Region, Sweden." *Land Use Policy* 84 (April): 294–304. doi:10.1016/j.landusepol.2019.03.016.

Högström, J., P. Brokking, B. Balfors, M. Hammer, M. Stjernberg, and J. Lidmo. 2024. "Exploring Local Spatial Planning as Practices of Process Design in the Stockholm Region, Sweden." *European Planning Studies* 32: 1097–1117. doi:10.1080/09654313.2023.2256800.

Isaksson, K., and P. Hagbert. 2020. "Institutional Capacity to Integrate 'Radical' Perspectives on Sustainability in Small Municipalities: Experiences from Sweden." *Environmental Innovation and Societal Transitions* 36 (May): 83–93. doi:10.1016/j.eist.2020.05.002.

Isaksson, K., and S. Heikkinen. 2018. "Sustainability Transitions at the Frontline. Lock-in and Potential for Change in the Local Planning Arena." *Sustainability* 10 (3): 840–817. doi:10.3390/su10030840.

Isaksson, K., K. Oldbury, and G. Marsden. 2022. "Lessons Learned About Experimentation in an Era of Transformation." In *Experimentation for Sustainable Transport? Risks, Strengths, and Governance Implications*, edited by K. Oldbury, K. Isaksson, and G. Marsden, 207–224. Boxholm: Linnefors förlag.

Kalbro, T., E. Lindgren, and J. Paulsson. 2015. "Urban Development Plans and Permits: Inefficiencies in the Swedish Legal System." In *Challenges for Governance Structures in Urban and Regional Development*, edited by Erwin Hepperle, Robert Dixon-Gough, Reinfried Mansberger, Jenny Paulsson, Franz Reuter, and Meltem Yilmaz, 75–87. Zurich: vdf Hochschulverlag AG

Karrbom Gustavsson, T., A. Hallin, and P. Dobers. 2024. "Stakeholder Involvement in Distributed Projects: A Performative Approach to Large Scale Urban Sustainable Development Projects and the Case of Stockholm Royal Seaport." *Construction Management and Economics* 42: 146–161. doi:10.1080/01446193.2023.2232893.

Krehl, A., and S. Weck. 2020. "Doing Comparative Case Study Research in Urban and Regional Studies: What Can be Learnt from Practice?" *European Planning Studies* 28 (9): 1858–1876. doi:10.1080/09654313.2019.1699909.

Krigsholm, P., T. Puustinen, and H. Falkenbach. 2022. "Understanding Variation in Municipal Land Policy Strategies: An Empirical Typology." *Cities* 126: 1–13. doi:10.1016/j.cities.2022.103710.

Kronsell, A., and D. Mukhtar-Landgren. 2018. "Experimental Governance: The Role of Municipalities in Urban Living Labs." *European Planning Studies* 26 (5): 988–1007. doi:10.1080/09654313.2018.1435631.

Mäntysalo, R., K. Jarenko, K. Nilsson, and I. Saglie. 2015. "Legitimacy of Informal Strategic Urban Planning – Observations from Finland, Sweden and Norway." *European Planning Studies* 23 (2): 349–366. doi:10.1080/09654313.2013.861808.

Metzger, J., and J. Lindblad. 2020. "Introduction: A Practice-Centered Approach to Dilemmas of Sustainable Urban Development." In *Dilemmas of Sustainable Urban Development: A View from Practice*, edited by J. Metzger and J. Lindblad, 1–20. New York: Routledge.

Norell Bergendahl, A. 2016. *Den ohållbara resan mot det hållbara resandet*.

Olsson, L. 2018. "The Neoliberalization of Municipal Land Policy in Sweden." *International Journal of Urban and Regional Research* 42 (4): 633–650. doi:10.1111/1468-2427.12651.

Parks, D. 2019. "Energy Efficiency Left Behind? Policy Assemblages in Sweden's Most Climate-Smart City." *European Planning Studies* 27 (2): 318–335. doi:10.1080/09654313.2018.1455807.

Polk, M. 2011. "Institutional Capacity-Building in Urban Planning and Policy-Making for Sustainable Development: Success or Failure?" *Planning Practice and Research* 26 (2): 185–206. doi:10.1080/02697459.2011.560461.

Puustinen, T., H. Falkenbach, A. Ekroos, and S. Junnila. 2025. "Integrating Climate Policy Objectives into Municipal Land Policies: From Conceptualization to Empirical Evidence from Finland." *International Journal of Urban and Regional Research* 49 (1): 69–94. doi:10.1111/1468-2427.13294.

Roggero, M. 2025. "Becoming Sponge City Berlin: 'planned Scaling' vs. 'Permanent Experimentation'." *Journal of Environmental Policy & Planning* 27: 612–624. doi:10.1080/1523908X.2025.2497939.

Scholl, C., and J. De Kraker. 2021. "Urban Planning by Experiment: Practices, Outcomes, and Impacts." *Urban Planning* 6 (1): 156–160. doi:10.17645/up.v6i1.4248.

Singhapathirana, P., E. Hui, and W. Jayantha. 2022. "Critical Factors Affecting the Public Land Development: A Systematic Review and Thematic Synthesis." *Land Use Policy* 117: 1–11. doi:10.1016/j.landusepol.2022.106077.

Smedby, N. 2020. "Limits to Polycentricity? Institutional Layering and Policy Feedbacks of Building Energy Performance Requirements in Sweden." *Environmental Policy and Governance* 30 (2): 71–83. doi:10.1002/eet.1874.

Smedby, N., and L. Neij. 2013. "Experiences in Urban Governance for Sustainability: The Constructive Dialogue in Swedish Municipalities." *Journal of Cleaner Production* 50: 148–158. doi:10.1016/j.jclepro.2012.11.044.

Sondal, J., A. Hellquist, and B. Balfors. 2024. "From Pilot to Practice: Navigating pre-Requisites for up-Scaling Sustainable Urban Solutions." *Urban Transformations* 6 (1): 1–17. doi:10.1186/s42854-024-00063-5.

Spit, T. 2025. "Land Development in Land Policy Processes: Actors and the Dominance of the Pipe-Line Effect." In *Land Policies in Europe: Land-Use Planning, Property Rights, and Spatial Development*, edited by T. Hartmann, A. Hengstermann, M. Jehling, A. Schindelegger, and F. Wenner, 227–233. Cham: Springer.

Storbjörk, S., M. Hjerpe, and E. Glaas. 2019. ""Take It or Leave It": From Collaborative to Regulative Developer Dialogues in Six Swedish Municipalities Aiming to Climate-Proof Urban Planning." *Sustainability* 11 (23): 1–16. doi:10.3390/su11236739.

Torrens, J., and T. von Wirth. 2021. "Experimentation or Projectification of Urban Change? A Critical Appraisal and Three Steps Forward." *Urban Transformations* 3 (1): 1–17. doi:10.1186/s42854-021-00025-1.

Trygg, K., and H. Wenander. 2022. "Strategic Spatial Planning for Sustainable Development – Swedish Planners' Institutional Capacity." *European Planning Studies* 30 (10): 1985–2001. doi:10.1080/09654313.2021.2001792.

Valtonen, E., and H. Falkenbach. 2025. "Land Policy in Finland: Public Land Development Still Standing Strong, Even on Brownfield Land." In *Policies in Europe: Land-Use Planning, Property Rights, and Spatial Development*, edited by T. Hartmann, A. Hengstermann, M. Jehling, A. Schindelegger, and F. Wenner, 91–104. Cham: Springer.

Valtonen, E., H. Falkenbach, and K. Viitanen. 2018. "Securing Public Objectives in Large-Scale Urban Development: Comparison of Public and Private Land Development." *Land Use Policy* 78: 481–492. doi:10.1016/j.landusepol.2018.07.023.

van der Leer, J., A. Calvén, W. Glad, P. Femenías, and K. Sernhed. 2023. "Energy Systems in Sustainability-Profiled Districts in Sweden: A Literature Review and a Socio-Technical Ecology Approach for Future Research." *Energy Research & Social Science* 101: 1–15. doi:10.1016/j.erss.2023.103118.

Vigar, G., P. Cowie, and P. Healey. 2020. "Innovation in Planning: Creating and Securing Public Value." *European Planning Studies* 28 (3): 521–540. doi:10.1080/09654313.2019.1639400.

Wallhagen, M., J. Akander, A. Hayati, M. Cehlin, and B. Karlsson. 2023. "Viewpoints on Environmental Assessment of Building Certification Method – Miljöbyggnad." In *Urban Transition - Perspectives on Urban Systems and Environments* edited by Marita Wallhagen and Mathias Cehlin, 1–31. London: IntechOpen. doi:10.5772/intechopen.100699

Witzell, J., and K. Oldbury. 2023. "Embedding Research-led Urban Experiments? Institutional Capacities and Challenges in Mundane Planning Settings." *Nordic Journal of Urban Studies* 3 (2): 21–37. doi:10.18261/njus.3.2.2.

Woestenburg, A., E. van der Krabben, and T. Spit. 2019. "Legitimacy Dilemmas in Direct Government Intervention: The Case of Public Land Development, an Example from the Netherlands." *Land* 8 (7): 1–19. doi:10.3390/land8070110.

Wretling, V., and B. Balfors. 2021. "Building Institutional Capacity to Plan for Climate Neutrality: The Role of Local Co-operation and Inter-Municipal Networks at the Regional Level." *Sustainability* 13 (4): 2173–2121. doi:10.3390/su13042173.